

## REVIEWS.

ART. XII.—*A Treatise on Tuberculosis, the Constitutional Origin of Consumption and Scrofula.* By HENRY ANCELL, late Surgeon to the Western General Dispensary, etc. etc. London, 1852: 8vo. pp. 779.

TUBERCULOSIS is regarded by Mr. Ansell as strictly a blood disease. He refers to a primary morbid condition of the blood all the local tubercular affections. He goes yet a step farther than most other pathologists, since he believes in the existence of tuberculosis as a disease of the blood, independently of any local deposit. He says in the preface:—

“Since the discovery of the stethoscope, we have habituated ourselves so much to depend upon the presence or absence of tubercles as the sure and only indications of the presence or absence of the constitutional disease, that we have nearly lost sight of the possibility of the existence of the one without the other; and yet, if we only watch tuberculous subjects closely, we may observe them for many months or even years, with the general symptoms of tuberculosis, without the slightest indication of local disease, but ultimately dying from tubercle rapidly developed in several organs at once; or we find young persons affected with scrofulous joints, who take to their beds without a sign of internal tubercularization, but soon exhibit all the symptoms of the general disease in its progressive form; until ultimately tubercle is developed in the lungs, the mesentery, or other organs.”

Hence it may be seen that the subject is treated on an original plan; the prevailing idea is carried, also, systematically throughout the work; the symptoms, causes, treatment, &c., being all referred to, and made dependent upon the original blood disease. Mr. Ansell was already known as a zealous cultivator of pathological chemistry; he published, in the *Lancet*, a “Course of Lectures on the Physiology and Pathology of the Blood,” and, subsequently, defended Liebig’s doctrines in a series of commentaries, entitled, “*Liebig and his Reviewers.*” Practically familiar with the processes of medical chemistry, endowed with uncommon powers of generalization and analysis, and enriched by a long clinical experience, our author was certainly well fitted to carry into effect his long-cherished design of systematizing the pathology of tuberculous and scrofulous diseases. Of the identity of these, he expresses strongly his conviction; and, consequently, treats of them throughout under the same designation. He considers *scrofula* as merely a form of tubercular disease, but yet essentially the same as it, and due to the same morbid condition of the blood, whatever that may be. Upon examining into the sources from which are derived the results used by the author to characterize the actual condition of the blood in tuberculosis, we find that these are taken from the analyses of Andral and Gavarret, Nicholson, Glover, and Fricke. Now the blood, analyzed by these writers, was taken from persons with scrofulous diseases and with incipient and confirmed phthisis. It is in vain to conceal the fact that here may be important sources of error. If, for instance, we turn our attention to the scrofulous affections, we find so many important dissimilarities in form, seat, and general pathology from the strictly tubercular diseases, that we cannot avoid feeling much doubt of the propriety

of classing them with these latter. And, if we go further, and inquire concerning the anatomical characters of these two forms of disease, we discover that a certain number are really tubercular (*i. e.*, characterized by a deposit of tubercle), while many are not. Whatever resemblance there may be between the constitutional symptoms of two diseases, very certainly the only true basis for a nosological distinction is to be found in the anatomical lesions.

Mr. Ancell says (p. 624): "The local products of scrofula and of indisputable tubercular disease have the same anatomical elements. Both are subject to the same metamorphosis of softening and eretification." If we examine, however, the diseases which come under these designations, we find that they require to be divided into two classes, one of which comprises those in which no local deposit of tubercle takes place, and the other where it is supposed invariably to be present. The first class includes what may be properly termed *scrofulous* diseases, for want of a better name, and in the second are found, with the undoubted tubercular affections, a certain number more generally called scrofulous. It is of these latter that the question arises, are they tubercular or not? We allude to the diseases of the external lymphatic glands and of the bones and joints occurring in persons of a strumous habit. The only correct answer to this question is found in the anatomical changes of the parts affected.

In the external lymphatic glands there are three very distinct pathological conditions. In one, the substance of the gland is redder, firmer, and more developed than in health; and at a more advanced period its tissue assumes a granular aspect, and becomes of a tough, fleshy consistence. This is the form of scrofulous swelling most amenable to medical treatment, local or general; it may gradually disappear, and leave no trace of its existence. It contains no unorganized product incapable of resorption; and, strictly speaking, is nothing more than a chronic engorgement of the glandular structure. This enlarged gland may, however, become the seat of an albuminous exudation, constituting a second form of disease. This albuminous blastema infiltrated through the gland is of a pearly colour, and resembles the gray tubercular matter found in the lungs. We are disposed to believe that in itself it undergoes no transformation. It constitutes that form of swelling which remains stationary for an unlimited period, proving rebellious to all the best-directed medical treatment, and only ulcerating from the effect of external irritation and violence, or from the deposit in it of the real yellow tubercle.

This latter, when grafted on the preceding form, or developed independently, forms the third variety of scrofulous tumours of the neck. Its proper termination is, of course, in ulceration; the chalky transformation being extremely rare. Hence, manifestly, it is erroneous to consider ulcerated glands of the neck as offering the type of *scrofulous* disease, as has been done by Phillips and others. On the contrary, we would place them, like Lebert, among the tubercular affections, excluding only a certain number, the first variety which we have described.

This same distinction may profitably be made among the diseases of the bones and joints, with regard to which, the terms *scrofulous* and *tubercular* are employed as convertible by many persons. It is, indeed, true that our knowledge of the condition of bones and joints thus affected rests upon no very sure foundation; a very great difference of opinion prevailing respecting the most important point in their pathology—the initial step in the disease, *its* true nosological character and location. Yet, we think, enough is known to show that tubercle exists in bone mostly in an encysted form, and that it makes its way, in a very gradual manner, either to the periosteal surface, or,

if in the neighbourhood of a joint, into it; but, as for tubercular *infiltration* of bone, its existence rests upon very insufficient demonstration, and is more probably inferred from an assumed analogy between the tubercular processes in the lungs and that in the bones. The only clearly demonstrated form is that of the encysted tubercle; while even here, it must be remembered that a purulent *foyer* may receive a membranous investment in the same manner, and is very probably often erroneously looked upon as tubercular. Yet, admitting the occurrence of tubercle in bone, there yet remains the far more frequent disease of *caries*; this may commence in the periphery or in the interior of the bone. It has no similarity with tubercular disease either in its progress or results; the pus and the detritus resulting from the decay and elimination of dead tissue having their own peculiar character, but in no respect like the tubercular product. The inflammatory process in a scrofulous constitution acquires a peculiarity which is perhaps more easily understood than defined, but which manifests itself in all tissues alike. The essentiality of scrofula and its peculiar physiognomy can be affirmed without our being able to show that it possesses any such constant product as have tubercular or cancerous disease. It bears with it always the same features, which can be recognized, whether it be in the organs of sense, the articulations, the skin, glands, or bones.<sup>1</sup> It may not be inappropriate to direct attention here to a fact fully established by cases reported by Lebert, in his classical work upon scrofulous and tuberculous diseases. We refer to the apparent inversion of the usual relation between the deposit of tubercle in the lung and the other parts of the body. The opinion of Dr. Louis, founded upon ample observation, and since fully corroborated by other writers is, that where, after the age of 15 years, tubercle is found in other parts of the system, we may look for it with confidence in the lungs. Yet Dr. Lebert reports cases in which the most extensive disease and disorganization of the vertebral column and other portions of the bony frame were found, while the lungs contained not a single tubercle, or but a most insignificant trace of it. Were we to admit these as instances of tubercular degeneration of bone, how glaring an exception would they form to the well-known relations of the disease. While it is desirable never to lose sight of the axiom that the proof of the presence or absence of the tubercular (or any other specific) product ought of right to rest upon physical demonstration by the microscope or by chemical analysis, yet neither of these appliances are, we venture to assert, in this matter more to be trusted than the unassisted senses. The extreme difficulty of discovering a few tubercular cells or of detecting by any chemical test the presence of tubercle in a mass of carious suppuration, containing the *débris* of bony, muscular, and ligamentous tissue, obliges us to have recourse to these methods of reasoning. Those who contend for the great frequency of tubercle in scrofulous diseases of the bones and joints, should rest their demonstration on less vacillating ground than these microscopic elements, about the worth of which no two pathologists can be found to agree. There is hardly a point in microscopic anatomy more debated than this one, and the opinions for or against the existence of characteristic tubercular cells are equally decided. Consider-

<sup>1</sup> Dr. Pepper has lately described (*Am. Journ. of Med. Sci.* April, 1852) a "scrofulous induration of the lung" itself, as distinct from the induration from tubercular deposit. His observations give additional force to the distinction we desire to make between the two diseases. If, indeed, the right of scrofula to share the sway, before almost undisputed, of pulmonary tubercle be fully established, we shall have much reason to be more sanguine of the results of medication. We may add that Dr. P.'s cases prove equally the *dissociation* of the two diseases, and their independent character.

ing this question still unsettled, we believe that there is yet sufficient evidence, from the relations and laws of association of the two diseases, to establish the absence of identity between them. This view is maintained by Lebert, who is at the same time the most distinguished opponent of the doctrine of identity and the most zealous advocate of the possibility of recognizing microscopic tubercular elements.

We have designed merely to draw attention to the anatomical considerations which require that a distinction should be drawn between tubercle and scrofula. Much more might be brought to confirm this result from general pathological reflections, but our limits will not allow us to enter upon this discussion. Enough probably has been said to show that, in order to ascertain the condition of the blood in *tuberculosis*, whether latent or developed, it is not logical to make use of cases of *scrofula*, very palpable distinctions existing between the two. At the same time, we have no reluctance to assent to the result arrived at by Mr. Ancell, viz., that these diseases are characterized by a "defective vitality" in the blood. This is a point that hardly required demonstration, being so obvious that, with perhaps the exception of some devoted followers of Broussaism, it must command universal assent. The objections we have made are, therefore, not directed at the conclusion Mr. Ancell arrives at, but against the methods which he employs.

Mr. Ancell maintains that the blood is tuberculous before the development of local disease. He admits (p. 582) that "there is at present no known sign of diagnostic value by which tuberculous blood can be distinguished from that which is non-tuberculous;" but nevertheless considers that,

"In many cases, with a knowledge of the antecedent and present history of the patient, and a correct estimate of the causes of the disease, the diagnosis may be made, if not with certainty, still, with a high degree of probability; in other cases, with all this knowledge at our command, it is a problem of the greatest difficulty. It involves the determination, at any period of life, of the existence or non-existence of a tuberculous condition of the blood—of that quality which produces the mal-nutrition of the tissues, so fully described (p. 29), and which keeps the individual in continual risk of the exudation into the intimate structure of the vital organs of an imperfectly organized blastema."

Again (p. 112):—

"It occasionally happens that tuberculosis proceeds, in the adult, to the last stage of marasmus and a fatal issue without hæmoptysis, the aggregation of tubercle, or any obvious local affection. It frequently happens, also, that some local affection, as tubercles in the lungs, supervenes, but of so circumscribed an extent that it interferes little with the functions of the organ or the general symptoms of tuberculosis, or of the tuberculous predisposition, and, from hygienic or other causes the general affection subsides, and nature renders inert the local mischief by a cretaceous formation or a fibrinous deposit."

These extracts show pretty clearly the author's prevailing idea, that tuberculosis is a disease of the blood, and tubercle its local manifestation. Hence, he desires to anticipate the occurrence of local disease by arresting it in its primary phase in the tuberculous predisposition. But here we are met by the difficulty of accurately knowing where the tendency ends and the disease begins. The author admits that there is no clear line of demarcation, and says, also, that the predisposition does not necessarily pass into disease:—

"Many, having been deemed consumptive throughout life, from having exhibited this constitution in a well-marked form, have nevertheless attained longevity, and died from some other malady." P. 59.

We find the *diagnosis* of the tuberculous predisposition and of tuberculosis

(a more advanced stage of the predisposition, but still anterior to the deposit), described in the first two chapters. The description of the former corresponds with the ordinary portrait of the scrofulous constitution. The signs and symptoms of tuberculosis are distributed under the following heads (p. 64):—

- "(1.) Anemia.
- "(2.) Atrophy; *a*, attenuation of the mucous membranes; *b*, attenuation of bloodvessels and hemorrhage.
- "(3.) Direct debility; *a*, of the secretory functions; *b*, of the digestive; *c*, of the circulation and the involuntary muscular functions; *d*, of the respiratory functions; *e*, of the function of voluntary motion; *f*, of the nervous functions; *g*, of the generative functions.
- "(4.) Diminution of the power of sustaining the animal temperature.
- "(5.) Febricula."

It will readily be seen that this list is open to objection, on the ground that the presence of tubercles being not always ascertainable by our means of examination, even in cases where they may exist, in some organs, in great abundance, there is an impossibility of determining the share which the local deposit may take in producing the phenomena above enumerated. As a general description, however, of the symptoms attending the development of tubercular disease, the five sections of this chapter are very interesting, containing a great deal of information, evidently the result of close inquiry and observation.

In the third chapter, the *tuberculous deposits* are described. Mr. Ansell agrees with Lebert and Dr. H. Bennett, in regard to the existence of characteristic tubercle corpuscles. The detailed history of tubercle is given under the heads, of its seat, origin, physical and chemical characters, and transformations. All of these subjects are treated of at length, and ably handled. Mr. Ansell does not consider the gray granulation as a phase in its development, through which the tubercle must necessarily pass. He speaks of one form of gray granulation as a "product of chronic pneumonia independent of tuberculosis," and at the same time of a gray tubercular infiltration as distinct from this. If we understand the language rightly, the author's opinion is that there are two forms of the gray tubercle, the one occurring independently of inflammation, the other in an infiltrated state, the product of chronic inflammation in tuberculous subjects, which becomes the nidus for the deposit of the yellow or crude tubercle. It will be seen that the author differs, on this point, both from those pathologists who consider the granulation as *sui generis* and incapable of transformation, and from those who, following the example of Laennec, consider the gray miliary tubercle as the common parent of all varieties of the tuberculous deposit.

Mr. Ansell, in the next chapter, gives a comprehensive account of the special pathological anatomy of tuberculosis. The words scrofulous and tuberculous are made convertible throughout, so that many diseases which to us appear to have no tubercular character whatever, as various cutaneous eruptions, subcutaneous abscesses, &c., are ranked with the true tubercular diseases. But, overlooking this circumstance, we find, in this portion of the work, a very complete account of the condition of all the organs or structures affected by tubercle, embracing the results of the most recent observations. Before taking leave of this portion of the subject, we must give, as an illustration of the facility with which so eminent a pathologist as the author can be deceived by fanciful analogies, the following extract, quoted by Mr. Ansell as an instance of "universal tuberculosis of the bones:"—

"The exostoses are in some places two inches long; the majority of the tubercles, when cut into in a fresh state, exhibited the usual 'gray semi-trans-

parency,<sup>1</sup> and the internal viscera were not affected. The bones of the head alone were free; the spinal column and sternum were dotted all over with tubercles, the ribs on the right side especially; the second, third, and sixth presented large elevated tubercles. In the tenth rib there was a large excavation; and in fact all the ribs were tuberculous, as also the *os uncinatum*, and the whole lower extremity. Numerous other cases are described."<sup>1</sup>

We pass over the very elaborate pages devoted to the *causes* of tuberculosis, and come to the author's views upon the *treatment* of tubercular disease, or rather of tuberculosis. He discusses very fully the rules to be put in force against it. His aim is "to cure the tuberculosis, and thereby prevent the deposition of tubercles, or to render them innocuous when deposited." The first object he desires to accomplish by discouraging the intermarriage of tuberculous persons, whether they be blood connections or not. Moreover, Mr. A. thinks that it may be adopted as a principle, that advantage results from the *crossing of temperaments*, when a constitutional affection appears to have its origin or essence intimately associated with any particular temperament. With the same view, he would also discourage precocious or too late marriages, marriages where there is a great disparity of age, and the union of paralytic, epileptic, lunatic, and other subjects of uncured or incurable nervous diseases. He would also prohibit cohabitation under the influence of the causes of the disease, and during early convalescence after acute affections, and "endeavours to insure the perfect cure of any blood disease which is likely to lay the foundation either of debilitated or tuberculous children." He thinks it of importance, also, to consider the period of conception in reference to the actual state of the blood, as "the vigour or feebleness of the offspring depend upon the actual state of health or disease of the father or mother at the period of conception." While our knowledge upon matters like these, which are mostly out of the reach of medical interference, must always remain to a great extent vague and conjectural, there still can be no doubt of the importance of a closer attention to them. Mr. A. admits the great practical difficulty of enforcing these excellent precepts. No doubt, if we could control the propagation of the human race, as we can that of the domestic animals, insuring by judicious crossing the best examples of vigour and beauty, the general well-being would be vastly enhanced; but it is unfortunately too plain that the influence of physicians is, in these matters, most insignificant. Worldly interest, ungoverned affections, and indifference to the future, warp the judgment and shape the conduct of the majority of mankind. Physicians are busy in repairing the evils which vice and heedlessness are daily creating anew; their assistance is not often invoked to check the polluted tributary currents of disease, but only to stay the ravages of the already swollen tide. It will always be so; and however sincerely we may unite with Mr. Ansell in his philanthropic desires, it appears to us that the task he proposes is beyond the powers of any physician to accomplish.

We discover nothing particularly worthy of notice in the author's observations upon the *treatment* of tuberculosis. His remarks and precepts, while both lucid and judicious, possess no intrinsic originality. He has collated, also, from the best authors, much valuable information concerning appropriate hygiene and treatment. The results of his industry will no doubt be widely used and appreciated, especially the tabular statements made out by himself, as well as compiled from other authors. Among these are included valuable tables, showing the mortality from tuberculosis (or from tubercular and serofulous diseases), in various localities.

<sup>1</sup> "Pathologica Indica," by Allen Webb, 1848, p. 127.

The ever-present and characteristic feature of this interesting and voluminous treatise is, that tuberculosis is a disease of the blood primarily and ever. Were we asked how this fact is ascertained, we should be able only to answer, that the author does not claim to have discovered anything very peculiar in the condition of the blood beyond a probable diminution of its fibrine and red corpuscles; that this conclusion is obtained by analysis of serofulous blood, as well as of blood from persons with confirmed phthisis, and is therefore open to objection, since the differences between these two forms of disease have been shown to be important. We believe that the actual condition of the blood in tuberculosis (*i. e.* before tubercle is deposited) is extremely difficult to ascertain; since tuberculosis, as the author understands it, is rather a problematical affair. Positive and reliable results can only be obtained by microchemical analysis, after the most careful exclusion of every malady not positively tuberculous. Till this is done, we may pin our faith to any plausible theory of the constitutional origin of the disease, with the sad conviction that we can expect but little from such sources in combating the worst of "all the ills that flesh is heir to."

M. S.

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ART. XIII.—*On Rheumatism, Rheumatic Gout, and Sciatica; their Pathology, Symptoms, and Treatment.* By HENRY WILLIAM FULLER, M. D., Cantab., Fellow of the College of Physicians, London; Assistant Physician to St. George's Hospital, &c. &c. London, 1852: 8vo. pp. 403.

THERE are few diseases of such frequent occurrence as rheumatism, and of equal importance—whether viewed in reference to the amount of suffering it gives rise to, or the serious and often fatal results by which it is not unfrequently followed—in relation to the true pathology and treatment of which there exists greater uncertainty. This has, no doubt, arisen from the fact that the term rheumatism has been applied to a variety of affections, all marked alike by intense and obstinate muscular or articular pains, but differing essentially from each other in their character, origin, progress, and results, and each demanding for its cure a distinct course of treatment.

That the disease to which the term rheumatism is most generally applied, and to which it would be well invariably to restrict it, is dependent on a vitiated condition of the blood, we think there can be little doubt. Many of its leading and most characteristic phenomena are characteristic of an affection produced by a morbid cause existing in the circulating fluid.

"Its attacks are ushered in by premonitory fever; its local symptoms are erratic, and yet remarkably symmetrical in their arrangement; the heart, the lungs, and other internal organs are affected, and when metastasis occurs, the constitutional symptoms are such as are met with, under similar circumstances, in diseases known to be connected with a vitiated blood."

There is, in fact, a strong analogy between gout and rheumatism.

"So curiously do these two disorders coincide, so imperceptible in certain cases is the transition from the one to the other, that there is no little difficulty in distinguishing between them. In both, an hereditary taint may frequently be traced; in both, the fever is out of all proportion to the extent and severity of the local mischief; in both, the joints are the parts principally affected, and the inflammation, which is of a peculiar nature, observes a remarkable sym-